



Practice Guidance for JUDICIOUS USE OF ANTIBIOTICS

ACUTE UNCOMPLICATED SINUSITIS

"Approximately 2/3 of sinus infections resolve without antibiotics." 1,19

DIAGNOSIS OF ACUTE SINUSITIS IN THE IMMUNOCOMPETENT PATIENT:

Pediatric:

- Persistent nasal discharge²
- Daytime cough³
- Not improving at 10-14 days Unilateral sinus tenderness

Adult:4

- Purulent nasal discharge
- Maxillary pain (esp. unilateral)
- Worsening after initial improvement
- Not improving at 7-10 days

Sinus radiography should not be used in routine cases to diagnose acute rhinosinusitis.6,7

PATIENT PRESENTS WITH **ACUTE SEVERE SINUSITIS:**

Pediatric and Adult,

Acute Severe (Uncommon):5

- High (>39°C) or persistent fever (> 3-4 days)
- Periorbital swelling
- Severe facial/dental pain
- These symptoms need immediate attention, regardless of duration.

< 7-14 days duration (or longer if improving) OR symptoms are mild**

Symptomatic Treatment:

Saline irrigation, analgesics/antipyretics, topical and/or oral decongestants, moisture. (Antibiotics do not effectively treat URI or prevent bacterial sinusitis.)

Call practitioner if symptoms do not improve after 4-5 days of additional treatment

Moderate to severe symptoms, persistent mucopurulent discharge and/or daytime cough, without improvement for 7-10 days (in adults) or 10-14 days (in children) or longer

Are any of these Risk Factors present: • Under 2 yrs old • In daycare • Antibiotics in past 3 months or Recurrent infections

V NO

NO RISK FACTORS PRESENT (CHOOSE ONE):

- Amoxicillin: Adults: 1500 mg/day in 2 or 3 divided doses;9 Children: 45mg/kg/day in 2 or 3 div. doses
- True Penicillin allergy:* Trimethoprim-sulfa, Azithromycin, or Clarithomycin

Continue 7 days beyond substantial improvement.

YES 🗸

RISK FACTORS PRESENT (CHOOSE ONE):

- Amoxicillin: Adults: 3 Gm/day, in 2 or 3 divided doses; Children: 90 mg/kg/day, in 2 or 3 divided doses10
- True Penicillin Allergy:* Cefuroxime, Cefdinir or Cefpodoxime and/or allergy consult

NOTES:

- * True Penicillin Allergy: history of urticaria or anaphylaxis to a penicillin are indicative of true allergy. Morbiliform and maculopapular rashes are not indicative of true allergy. If history of penicillin anaphylaxis, consult an allergist before prescribing a cephalosporin, or consider antipneumococcal fluoroquinolone as last choice if > 18 yrs old.
- ** This dose ratio may not be available as a fixed combination. Clavulanate dose should not exceed 10 mg/kg/day. Using 2 products (e.g., amoxicillin 500 mg + Augmentin 500 mg) may be necessary to achieve the desired ratio

No improvement after 48-72 hours? Persistence of drainage alone is not indication for change of Rx.

- Amoxicillin: Adults: 3 Gm/day + Clavulanate 6.4 mg/kg/day, ** in 2 or 3 divided doses Children: 90mg/kg/day plus Clavulanate 6.4 mg/kg/day, ** in 2 or 3 div. doses, 10
- OR: Cefuroxime or Cefdinir or Cefpodoxime
- For True Penicillin allergy:* Consider Antipneumococcal fluoroquinolone in patients > 18 years old

Continue 7 days beyond substantial improvement. If no improvement, consider referral and/or sinus imaging.

WHEN BACTERIAL INFECTION IS PRESENT

Streptococcus pneumoniae 30-66% Hemophilus influenzae 20% Moraxella catarrhalis 10%

KEY POINTS

- Three meta-analyses have shown that newer and broadspectrum antibiotics are not significantly better than narrow-spectrum agents.⁹
- However recent emergence of resistant bacteria must be kept in mind.⁴
- Most viral rhinosinusitis is well or nearly well at 7-10 days; about 25% are still symptomatic at 14 days.⁸
- Color and type of nasal discharge do not predict bacterial infection.¹¹
- Bacterial infection is uncommon when symptom duration is less than seven days, unless patient is acutely ill.
- Imaging should be considered only when sinusitis is recurrent, complications are suspected, diagnosis is unclear, or surgery is being considered.

PREVENTION:8

- Vaccination:
- All newborns and children < 2 yrs should receive Prevnar. 9,10
- Children with recurrent infections should receive
 - Influenza vaccine if > 6 mo
 - 23-valent Pneumococcal vaccine if > 2 yrs11
- Cigarette smoke avoidance/cessation
- Consider allergen and irritant avoidance

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CONTACT

Art Sprenkle, MD Washington State Medical Education & Research Foundation

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John Watkins, RPh, MPH and Premera Blue Cross

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